

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



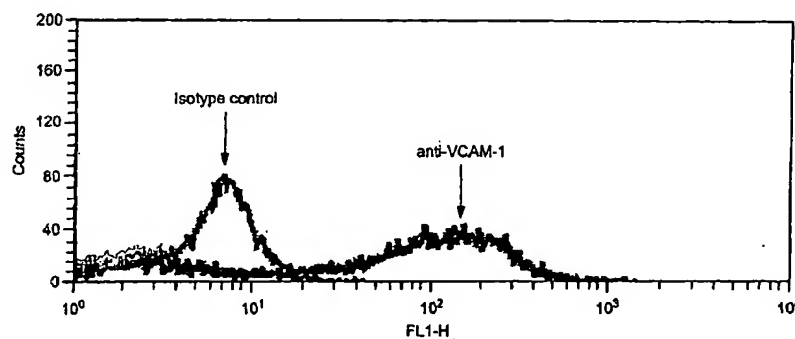
(43) International Publication Date
15 January 2004 (15.01.2004)

PCT

(10) International Publication Number
WO 2004/005531 A2

- (51) International Patent Classification⁷: C12Q (74) Agents: HUCHANAN, Robert, L. et al.; Edwards & Angell, LLP, P.O. Box 9169, Boston, MA 02209 (US).
- (21) International Application Number: PCT/US2003/021142 (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 3 July 2003 (03.07.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/393,961 5 July 2002 (05.07.2002) US (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
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- Published:
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: TARGETING AND TRACKING OF CELLS TO SPECIFIC ORGANS AND TISSUES IN VIVO



(57) Abstract: The present invention provides a method for tracking and targeting cells *in vivo*. In particular, cells are isolated, purified and armed with bispecific antibodies which are directly labeled with a detectable marker, or a second antibody specific for a region of the bispecific antibody is labeled with a detectable marker. The bispecific antibody is specific for a surface antigen of the cell and the second specificity of the specific antigen is for an antigen expressed on cells of tissues, organs or tumors. The armed and labeled cells can be tracked starting from the point of introduction into the animal until the cell reaches the target of interest by phenotyping cells from patient samples, obtained at different time intervals and locations, post-infusion. The isolated and purified cells are useful in any functional assay.

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PCT

(10) International Publication Number
WO 2004/005531 A3

(51) International Patent Classification⁷: A61K 39/395,
A01N 63/00, A61K 35/26, 35/28

(21) International Application Number:
PCT/US2003/021142

(22) International Filing Date: 3 July 2003 (03.07.2003)

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Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
9 December 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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